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Ciesla et al.(10) **Pub. No.: US 2011/0148793 A1**(43) **Pub. Date: Jun. 23, 2011**(54) **USER INTERFACE SYSTEM****Publication Classification**(76) Inventors: **Craig Michael Ciesla**, Mountain View, CA (US); **Micah B. Yairi**, Palo Alto, CA (US); **Nathaniel Mark Saal**, Palo Alto, CA (US)(51) **Int. Cl.**
G06F 3/041 (2006.01)(52) **U.S. Cl.** **345/173**(21) Appl. No.: **12/975,329**(22) Filed: **Dec. 21, 2010**(57) **ABSTRACT****Related U.S. Application Data**

(63) Continuation-in-part of application No. 12/497,622, filed on Jul. 3, 2009, which is a continuation-in-part of application No. 12/319,334, filed on Jan. 5, 2009, which is a continuation-in-part of application No. 11/969,848, filed on Jan. 4, 2008.

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A user interface system for receiving a user input that includes sheet that defines a surface and at least partially defines a fluid vessel arranged underneath the surface, a volume of fluid within the fluid vessel, a displacement device that influences the volume of the fluid within the fluid vessel to expand and retract at least a portion of the fluid vessel, thereby deforming a particular region of the surface, and an electrical sensor coupled to the sheet that receives an input provided by a user that inwardly deforms the surface of the sheet and that includes a first conductor and a second conductor that are electrically coupled to each other with an electrical property that changes as the distance between the first and second conductors changes.

